



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,923	06/25/2007	Jakob Maier	4100.P0424US	5881
23474 7590 07/19/2011 FLYNN THIEL BOUTELL & TANIS, P.C. 2026 RAMBLING ROAD KALAMAZOO, MI 49008-1631				
EXAMINER				
O'HARA, BRIAN M				
ART UNIT		PAPER NUMBER		
3644				
MAIL DATE		DELIVERY MODE		
07/19/2011		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/593,923  
Filing Date: June 25, 2007  
Appellant(s): MAIER ET AL.

\_\_\_\_\_  
Terryence F. Chapman  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 04/25/2011 appealing from the Office action mailed 10/25/2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

80-112 and 124-130

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

WO 02069696 A1	MAIER JR.	9-2002
WO 0215676 A1	VAN DER LINGEN	2-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 80-82, 90-94, 98-112, and 124-130 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Lingen et al. (WO 02/15676 A1) in view of Maier, Jr. (WO 02/069696 A1).**

Regarding **Claim 80**, Van der Lingen et al. discloses a retaining device (1) for the manual removal of teat cups (6) with a fastening device (2) for fixing the retaining device at a predetermined milking position (as shown in Fig. 1), the retaining device (1) being formed to hold each of a multiple number of teat cups (6, See Fig. 2) in a fixed position relative to the others during a first operational phase (Fig. 2), and to allow manual access to each of the retained teat cups (6) in such a way that, during a second operational phase (Fig.1), each teat cup (6) is manually movable (See arrow in Fig. 1; teat cup could also be moved manually) relative to the retaining device (1) and at least one additional teat cup (6) in more than one direction.

Van der Lingen et al. further discloses a stimulation mechanism (robotic arm shown in Fig. 1) but does not disclose it using a rhythmic movement. Maier, Jr. teaches a retaining device, wherein the retaining device (200) furthermore has a stimulation mechanism (206) that is formed to act mechanically (mechanical attachment of 206 and 203 transmits vibrations to all the hoses shown in Fig. 2) on at least one milk hose (205) that connects a teat cup (201) to the retaining device for inciting a rhythmic movement (206 can incite a variety of vibrations) to the teat cup while it is maintained in contact with and attached to a cow's teat ("transfer the length contraction" See Column 10, Lines 6-25).

At the time of invention, it would have been obvious to add the stimulation mechanism of Maier, Jr. to the retaining device of Van der Lingen et al. The motivation for doing so would have been to provide pre-stimulation to the teats; the pre-stimulation being highly controllable (since it's a separate system as opposed to pulsing the suction) and would not require the use of pulsed suction directly to the teats.

Regarding **Claims 81 and 82**, Van der Lingen et al. discloses the retaining device wherein: the retaining device has a container (bottom part of 7 containing elements 8) in which the teat cups are introduced at least partially during the first operational phase; furthermore comprises a guide device (14 and 15) for guiding milk hoses (13) during the movement of the teat cups (6) relative to the retaining device.

Regarding **Claims 90-94** Van der Lingen et al. discloses the retaining device wherein: the fastening device (2) is attached to a milking parlor support (See cross beams in the background of Fig.1); the fastening device can be adjusted in such a way

that the longitudinal axes of the milking cups are arranged virtually horizontally (See teat cups in Fig. 1); the fastening device is formed in such a way that the retaining device can be moved from a first position (via 10 and 12, Shown in Fig.1), which corresponds to the first operational phase, into at least a second position for cleaning at least an area of the teat cups (Cleaning position shown in Fig. 2); at least an area of the retaining device is manufactured of plastic (the use of plastic is an obvious design choice since it is easy to clean, Additionally Maier, Jr. teaches the use of plastic, element 350), said area holding the teat cups; and which furthermore has one or more cleaning connectors (See pipes running from elements 17).

Regarding **Claims 98-100**, Van der Lingen et al. discloses a cleaning device (9+17) which can be moved from one position to a second position (via 10), the cleaning device has a sealing element (17); the sealing element having at least one nozzle element ("Water and air conduits" Page 5, Line 32).

Regarding **Claims 101 and 102**, the apparatus of Van der Lingen et al. inherently has a power supply unit that is pneumatically driven in order to power the cylinders 10 and 12.

Regarding **Claims 103-106**, Maier, Jr. discloses a milk temperature sensor; a drive element (306) and actuator element (307) connected to a milk hose (via the teat cup); and a control mechanism (602).

Regarding **Claims 107-112** Van der Lingen et al. discloses a holding area (8) for the teat cups; hose sections (13) which are provide for connection to the teat cups (6) having a guide section (section which must curve over wheels 14 and 15); the hose

section having a milk hose and a control hose (in order to provide modern suction element 13 of Van der Lingen et al. would inherently have control and milk hoses); a device for pulling during post milking ("tensioning means" Page 5, Line 29); and a multiple number of teat cups (6) and connection hoses (13).

Regarding **Claims 124-130**, Van der Lingen et al. further discloses a milking parlor (4); a support (top portion of element 7); multiple number of teat cups (6); a fastening device (11) which can pivot into a milking and cleaning/disinfection position (can be pivoted to many positions via 12); the container has a device for disinfection (17); and further comprises a hose guide (14 and 15).

**Claims 83-89, 95-97, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Lingen et al. and Maier, Jr. as applied to claim 80 above, and further in view of Nordegren et al (US Patent 4,011,838 A).**

Regarding **Claims 83-86**, Van der Lingen et al. and Maier, Jr. disclose the retaining device as described above including individually retracting a milk hose when a milk flow sensor sees a minimum amount of milk flow (See Page 5, Lines 24-29 of Van der Lingen et al.) but do not disclose stopping the vacuum. Nordegren et al. teaches a retaining device (2) further comprising a controllable vacuum switching mechanism (16) that is formed to apply an operating vacuum to each of the teat cups in a controllable manner; wherein the vacuum switching mechanism (16) has: a control switch (44-47) for each of the teat cups; an operating mechanism that switches the operating vacuum depending on the distance of the teat cup from the retaining device (i.e. off when inside the container); comprises a turn-off device (16 controls 44-47 based on information from

14) that is formed to decouple a teat cup from the operating vacuum individually and automatically in the case of a loss of the milking vacuum in that teat cup. At the time of invention, it would have been obvious to one of ordinary skill in the art to supply the retaining device of Van der Lingen et al. and Maier, Jr. with the controllable vacuum mechanism of Nordegren et al. to more efficiently control pressure losses in the system if a teat cup becomes dislodged.

Regarding **Claims 87-89, 95-97, and 103**, the Van der Lingen et al. reference eludes to the fact that the milking box is hooked up to a milking installation, by showing hoses and lines that inherently run to some sort of milk collection area, but does not disclose the specifics of the connections.

Further regarding **Claims 87-89** Nordegren et al. further discloses several connectors that make possible a connection to one or more milk hoses (12) that connect the retaining device to a milking installation (12 runs to a milking installation) and to a vacuum line (34) of the milking installation; hose sections (portions between 4-7 and 12), wherein one end of each is hose section is connected to a connector (inherently it is connected via a connector) and wherein the other end of each hose section can be connected to a teat cup (4-7); and wherein each hose section has at least one control hose section (48-51), which can be connected on one end to a teat cup and on the other end to a corresponding control connector.

Further regarding **Claims 95-97**, Nordegren et al. further discloses controllable valves (44-47 and 36-39), which can switch the vacuum to one of the teat cups (via 48-51), and can be operated electronically (52-55).

Further regarding **Claims 103**, Nordegren et al. further discloses a sensor (14).

At the time of invention, it would have been obvious to one of ordinary skill in the art to provide the retaining device of Van der Lingen et al. and Maier, Jr. with the hose sections including a sensor, valves, and vacuum lines of Nordegren et al. The motivation for doing so would have been to hook up the retaining device of Van der Lingen et al. and Maier, Jr. to a modern milking facility for the purposes of gathering the milk from the cows.

**(10) Response to Argument**

**Rejection of Claims 80-82, 90-94, 98-112, and 124-130 under 35 U.S.C. 103(a) as being unpatentable over Van der Lingen et al. (WO 02/15676 A1) in view of Maier, Jr. (WO 02/069696 A1)**

**Re Claim 80:** On page 4 Line 4 - Page 5 Line 6 Appellant argues that the robot (3) having a tong-like gripper arm shown in Fig. 1 of the Van der Lingen et al. reference “is not specifically described” and “there is no disclosure regarding a stimulation mechanism in that the robotic arm shown in Figure 1 does not use a rhythmic movement.” Appellant then goes on to argue that

“the robotic arm of Van der Lingen is not used to provide any mechanical stimulation action nor is suited to provide any mechanical stimulation by acting mechanically on at least one milk hose, or one control hose, that connects a teat cup to the retaining device during the operational phase of the milking device.”

Based on the disclosure, it is unclear how the Appellant has concluded that the robot 3 is not capable of providing or cannot provide mechanical stimulation when the specific details of the arm have not been provided by the reference. The robot clearly has enough articulating joints which make it capable of performing a large variety of tasks, including providing mechanical stimulation. Regardless, the unsupported conclusionary statements by the Appellant about the robot in the Van der Lingen et al. reference are not seen to be commensurate with the scope of the rejection set forth in the 10/25/2010 Office action and thus are therefore off point. The rejection merely sets forth that the Van der Lingen et al. reference contains a robotic arm. The examiner agrees that there is no disclosure in the Van der Lingen et al. reference of the robot providing a rhythmic movement to the teat cup.

On Page 5 Lines 6-29 Appellant argues that the present invention requires that the teat cups are stimulated via mechanical motion transmitted **through the hoses** and not the vibrations being transferred to the hoses by the milk cup. This statement is not seen to be commensurate with the scope of the claims which require "a stimulation mechanism that is formed to act mechanically on at least one milk hose that connects a teat cup to the retaining device for inciting a rhythmic movement to the teat cup". Claim 80 does not require that hoses transmit mechanical motion. The stimulation mechanism 206 of Maier, Jr. delivers varying amounts of fluid pressure to the lines 207 which then vary the length of the lines 207. By varying the lengths of the lines, the stimulation system 206 of Maier, Jr. acts mechanically on the milk hoses via movement of the teat cups. This is further evidenced by the fact that Maier, Jr. discloses contraction regions

208 in the lines 207 in order to further facilitate movement of the teat cups. Since the teat cups move and the milk hoses 205 are attached to the teat cups, the milk hoses must also be subject to mechanical stimulation and movement. Thus the Maier, Jr. meets the stimulation mechanism limitations in Claim 80.

On page 5 Line 30 - Page 6 Line 9 Appellant argues that the stimulation device of Maier Jr. cannot be combined with the Van der Lingen et al. reference. Maier Jr. schematically discloses in Figure 2 how the stimulation mechanism 206 could be attached to a collecting piece 203. One of ordinary skill in the art would recognize that the stimulation mechanism 206 could be attached to a variety of structures in the Van der Lingen et al. reference. Most notably it is suggested that element 7 or element 9 of Van der Lingen et al. have multiple surfaces which could be used to attach a stimulation device like the one described by Maier Jr.

On page 6 Line 10 - Page 7 Line 7 Appellant argues that the robot 3 of Van der Lingen et al. "is clearly designed for gripping milking cups and not for stimulating the udder of an animal to be milked and cannot be used to implement the stimulation according to Maier, Jr." These arguments are not seen to be commensurate with the rejection set forth in the office action dated 10/25/2010. In response to applicant's arguments against the references individually (Van der Lingen et al.), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The office action merely states that Van der Lingen et al. discloses a stimulation mechanism as a

robotic arm. The rejection does not attempt to use the robot of Van der Lingen et al. to produce rhythmic movement. Instead, the entire stimulation mechanism of Maier Jr. is added to the structure of Van der Lingen et al. To further reiterate, Appellant appears to be arguing what the primary piece of prior art to Van der Lingen does not have, but fails to address the actual rejection that is set forth above, in that Maier Jr. discloses a stimulation device and is properly combined with Van der Lingen, therefore the rejection is proper as all the elements as claimed have been met.

**Claims 81, 82, 90-94, 98-112, and 124-130 are held as being rejected as set forth above.**

**Rejection of Claims 83-89, 95-97, and 103 under 35 U.S.C. 103(a) as being unpatentable over Van der Lingen et al. and Maier, Jr. as applied to claim 80 above, and further in view of Nordegren et al (US Patent 4,011,838 A)**

**Re Claim 80:** On page 7 Line 12 - Page 8 Line 4 Appellant argues that "there still is no motivation or teaching that would suggest to one of ordinary skill in the art to use the robotic milking arm of Van der Lingen et al, which is merely used to attach the milking cups to the teats of the animals to be milked, in a manner that would incite a rhythmic movement to the teat cup while it is maintained in contact with a cow's teat during the milking operation" and further that the Nordegren et al. does not cure the deficiency of the Van der Lingen and Maier, Jr. references. As described above, this argument is not seen to be commensurate with the scope of the rejections since the

10/25/2010 office action does not attempt to use the robotic arm of Van der Lingen et al. to incite rhythmic movement. The robot of Van der Lingen et al. is merely described as being disclosed by Van der Lingen et al.

**Claims 83-89, 95-97, and 103 are held as being rejected as set forth above.**

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/B. M. O./

Examiner, Art Unit 3644

/JOSHUA J MICHENER/

Primary Examiner, Art Unit 3644

**Conferees:**

Joshua Michener /J. M./

Primary Examiner, Art Unit 3644

Heather Shackelford /hcs/